

In view of the amendment and remarks filed on March 11, 2008, the 112 rejections have been withdrawn. The pending claims however continue to be unpatentable as following:

***Claim Rejections - 35 USC § 102***

1. Claims 26-28, 31-32, 34-35, 38-42 and 43 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Hans (US 4224118).

Applicant drafted some claims involve process limitations and functional language. Applicant is reminded that it is the product itself which must be new and unobvious, see *In re Pinkington* 162 USPQ 145, 147 (C.C.P.A. 1969). Product by process claims are not patentably distinct over product claims unless it can be shown that the product produced by the process is in some manner measurably distinct from the product produced by another process, therefore there will be no weight given to the product by process and functional language in the claims.

Hans teaches an electroplated article comprised of a metal coating(s) and a plastic substrate (col 1 L 15-16). The metal coating(s) is selectively plated over the plastic substrate (col 1 L 8-9).

The plastic substrate is an injection molded thermoplastic acrylonitrile butadiene styrene, which is a well known rubber/elastomeric material (col 2 L 4-5 & Applicant's own disclosure page 21 line 1).

A resinous stopoff (or mask) coating layer is formed onto part of the plastic substrate surface before metal coating (col 2 L 8-13). The metal coating is a

pretreatment to the surface before the electroplating step. The metal coating comprised of catalytic metal salts and sulfur containing acid (col 3 L 6-15).

The examiner is taking the position that Han's electrolytically coated plastic substrate is a flexible planar web since the substrate is a rubber/elastomeric material.

***Claim Rejections - 35 USC § 102/103***

2. Claims 26-28, 30-32, 34-43 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kawai et al (US 4425262).

Kawai teaches an electroplated article comprised of an electroconductive resin composition and a metal coating. The electroconductive resin composition is comprised of an ethylene/propylene copolymer rubber material, carbon black, sulfur and trithiolcyanuric acid (or adhesion promoter) (col 2 L 12-58). The resin composition is molded into a shaped article (col 2 L 5). The metal coating is electroplated onto the shaped resin article (col 1 L 5-13 & col 2 L 2-7). The metal in the metal coating is nickel and copper metals (col 3 L 41-43).

The electroconductive resin composition has an electrical resistance of  $< 300 \Omega\text{-cm}$ , the electrical resistance is measured at 1 cm interval (col 3 L 22-29 & L 49-51).

Kawai does not state any specific structure of his article, the examiner is taking the position that Kawai's electroplated article is a planar web structure.

Kawai is silent about the metal coating is patterned or selectively plated. The examiner is taking the position that whether metal coating is patterned or not, is part of

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the design scheme, and only one way or the other exists (i.e. either selectively patterned or not selectively patterned). Such design scheme is conventional.

3. Claims 26-28, 31-32, 34-35, 37-43 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Adelman (US 4038042).

Adelman teaches a plastic composition which can be directly electroplated with a metal.

The plastic composition is an acrylonitrile-butadiene-styrene resin and is molded into a shaped article (col 2 L 5-8 & col 4 L 35-38). The resin further comprised of carbon black (col 4 L 45-46). The article has a volume resistivity of less than 25  $\Omega$ -cm (col 4 L 66-68).

The article is electroplated with a metal coating which includes metals such as nickel and chromium, etc. (col 7 L 20-28).

Adelman is silent about the metal coating is selectively coated (or patterned) over the plastic article. However, the examiner is taking the position that whether the metal coating is selectively coated or not, is one of the conventional design schemes. The examiner also takes the position that Adelman's article is a planar web structure.

***Claim Rejections - 35 USC § 103***

4. Claims 26-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawai et al (US 4425262) or Adelman (US 4038042) in view of Hans (US 4224118).

Kawai and Adelman both teach an electroconductive resin composition material which is molded into an article. The resin article is electroplated with a metal material without any surface pre-treatment.

Kawai and Adelman however are silent about the metal coatings are selectively plated (or patterned).

Hans teaches an article comprised of a molded plastic substrate and a metal coating. The metal coating is selectively electroplated onto the surface of the plastic substrate (col 1 L 8-9 & L 15-21).

In view of the prior art teachings, one skill in the art would fabricate a selectively electroplated article because it is well known to pattern a layer by using a mask or a resist as taught by Hans (col 1 L 53-57).

Conventional electronic devices and electronic circuit boards all comprised of an electroconductive layer plated over a non-electroconductive or a dielectric layer. It is obvious that applicant's selective electroplated structure is used as an electronic device.

Regarding to the thickness of the electroconductive material as stated in claim 36, the examiner is taking the position that such thickness can be determined and achieved without difficulty because it is just a matter of design choice.

Furthermore, regarding to the second material being a fabric web and a continuous substrate, the examiner is taking the position that a fiber reinforced substrate and a flat belt cable are well known in the field of printed wiring boards.

Claims 33-35 and 42, these claims are intended use, the examiner is taking the position that since the above cited prior art meet the claimed limitations, it would be obvious that the prior art products can be used to perform the same job.

### ***Response to Arguments***

5. Applicant's arguments filed on March 11, 2008 have been fully considered but they are not persuasive. The prior art cited in the office action are believed to be pertinent and teach the idea of the present invention.

Hans is a relevant reference, although it teaches a stop-off mask, but Applicant has not clearly stated or claimed that invention excludes the using of masks.

Both Kawai and Adelman teach the present invention, but just not clear on the electroplating metal was in pattern, the examiner takes the position that forming conductive patterns using electroless and/or electrolytic plating are well known in the printed wiring board art.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cathy Lam whose telephone number is (571) 272-1538. The examiner can normally be reached on 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cathy Lam/  
Primary Examiner, Art Unit 1794